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EXAMINER
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CHEUNG, WILLIAM K

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1713

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/825,725  
Filing Date: April 15, 2004  
Appellant(s): LINDEMANN, JUTTA

**MAILED**  
**AUG 20 2007**  
**GROUP 1700**

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Jacqueline M. Nicol  
(Registration No. 44,970)  
For Appellant

**EXAMINER'S ANSWER**

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This is in response to the appeal brief filed April 30, 2007 appealing from the Office action mailed August 23, 2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

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**(8) Evidence Relied Upon**

<b>6,552,130</b>	<b>Makino et al.</b>	<b>4-2003</b>
<b>6,211,259</b>	<b>Borden et al.</b>	<b>4-2001</b>

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-21 are being appeal. Claims 22-25 are drawn to non-elected subject matter.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
2. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Makino et al. (US 6,552,130 B1) in view of Borden et al. (US 6,211,259).

*The invention of claims 1-21 relates to a (meth)acrylate resin comprising:*

**20-85 % by weight (meth)acrylate**

**10-40 % by weight of a polymer soluble in (meth)acrylate**

**0.1-2 % by weight paraffin**

**0-50 % by weight hydroxyl(meth)acrylate; and**

**0.1-2 % by weight adhesion promoter, wherein the adhesion promoter is a phosphoric ester.**

Makino et al. (abstract; col. 12-23, working examples, Tables and comparative examples; col. 23, claims 1-5) disclose methacrylate resin compositions that are very similar to the resin composition as claimed. Makino et al. (col. 12, line 20-26) disclose a composition comprising MMA, TEGDMA, and at mixture paraffin waxes having different melting points as claimed). Regarding the claimed adhesion promoter, Makino et al. (col. 10, line 3) clearly indicate the use of silane coupling agent for improving the bonding strength of resin with the fillers. Regarding the claimed stabilizer, Makino et al. (col. 10, line 15-20) clearly disclose using 2,4-dimethyl-t-butylphenol for improving storage stability. Makino et al. (col. 10, line 38-49) teach the incorporation of pigment and dye to the disclosed resin composition. Makino et al. (col. 19, line 20-32) disclose the composition comprising the use of benzoyl peroxide with dimethyl p-toluidine as accelerator. Makino et al. (col. 10, line 14) also disclose using defoaming agents.

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The difference between the invention of claims 1-21 and Makino et al. is that Makino et al. are silent on a single embodiment comprising a hydroxyl (meth)acrylate. Regarding claims 14-15, the further difference between the invention of claims 14-15 with Makino et al. is that Makino et al. are silent on the specific combination of primary and secondary stabilizers as claimed.

Regarding the claimed "hydroxyl(meth)acrylate", Makino et al. (col. 3, line 19-48) disclose a list of functionally equivalent (meth)acrylic acid ester for the disclosed composition. Motivated by the expectation of success of obtaining resin system that can be cured by redox-type polymerization initiator (col. 1, line 26-32), it would have been obvious to one of ordinary skill in art to use a mixture of the disclosed list of functionally equivalent (meth)acrylic acid ester to obtain the invention of claims 1-19, 21. According MPEP 2144.07, "It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art." In re Kerkhoven, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) (citations omitted) (Claims to a process of preparing a spray-dried detergent by mixing together two conventional spray-dried detergents were held to be prima facie obvious.). See also In re Crockett, 279 F.2d 274, 126 USPQ 186 (CCPA 1960) (Claims directed to a method and material for treating cast iron using a mixture comprising calcium carbide and magnesium oxide were held unpatentable over prior art disclosures that the

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aforementioned components individually promote the formation of a nodular structure in cast iron.); and Ex parte Quadranti, 25 USPQ2d 1071 (Bd. Pat. App. & Inter. 1992) (mixture of two known herbicides held prima facie obvious). But see In re Geiger, 815 F.2d 686, 2 USPQ2d 1276 (Fed. Cir. 1987).

Regarding claims 14-15, since Makino et al. (col. 10, line 15-20) clearly disclose using 2,4-dimethyl-t-butylphenol for improving storage stability. Motivated by the expectation of success that the disclosed composition can be benefited from using a stabilizer, it would have been obvious to one of ordinary skill in art to look for other stabilizer, especially the combination use of common primary and secondary stabilizers such as the ones as claimed from the major additive suppliers for further stabilization improvement to obtain the invention of claims 14-15.

Regarding claim 20 which claims the viscosity of the obviated composition, in view of substantially identical composition between the composition of claim 20 and the obviated composition of Makino et al., the examiner has a reasonable basis to believe that the claimed viscosity of claim 20 is inherently possessed in Makino et al. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to appellants to show otherwise. In re Best, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

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The difference between the invention of claims 1-21 and Makino et al. is that silent on a composition comprising phosphoric acid esters.

Borden et al. (col. 15, line 66 to col. 16, line 47) disclose the advantages of using phosphoric and polyphosphoric acid esters to enhance the adhesion properties of composite materials. Therefore, motivated by the expectation of success of improving the adhesion properties of composite materials, it would have been obvious to one of ordinary skill in art to incorporate phosphoric or polyphosphoric acid esters into the composition of Makino et al. to obtain the invention of claims 1-21.

#### **(10) Response to Argument**

Appellant's arguments filed August 16, 2006 have been fully considered but they are not persuasive:

Appellants (Appeal Brief, page 10) argue that the composition teachings in Makino et al. teach away from the claimed invention because the composition of Makino et al. requires other ingredients, such as components (C), (F), and (G) to function properly. Without components (C), (F), and (G), the compositions as taught in Makino et al. would not possess desirable properties. However, appellants fail to recognize that claims as written do not require the components (C), (F), (G), or any other ingredients disclosed therein (i.e. the argued silane coupling agent) to be omitted, in view of the



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recitation "comprising" of appellants' claim 1 (line 1). Therefore, the examiner has a reasonable basis to believe that Makino et al. is not a reference that teaches away from the appellants' claimed invention, nor the teachings of Makino et al. destroy the original teachings of Makino et al.

Appellants argue that there is not motivation to combine the teachings of Makino et al. (US 6,552,130 B1) with Borden et al. (US 6,211,259), because the urethane chemistry of Borden et al. and the chemistry of (meth)acrylic resin composition as claimed are different. However, appellants must recognize that an adhesive property has to deal with the interactions between the surfaces of at least two different substrates, such as the polyurethane and acrylic gel coat of Borden et al. Appellants must recognize that Borden et al. (abstract; col. 15, line 66 to col. 16, line 47) teach the use of phosphoric and polyphosphoric acid ester to enhance the adhesion properties of composite materials can be used on thermoplastic, acrylic, and gel coat materials, which means there is no compatibility issue to use the phosphoric and polyphosphoric acid ester in an acrylic material. Appellants must also recognize that phosphoric and polyphosphoric acid ester are adhesion promoters which are designed to be compatible a broad range of materials in order to adhere substrates with different surface properties, appellants have no basis to argue that phosphoric and polyphosphoric acid ester (which is an adhesive promoter or compatibilizer) having compatibility problem with an acrylic material.

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Appellants also argue that primary reference Makino et al. requires a silane coupling agent. Since there is not a teaching to indicate that a silane coupling agent would be compatible with an acrylic resin, there is no motivation to combine the teachings of Makino et al. and Borden et al. However, appellants fail to recognize that the primary reference, Makino et al., teaches both the silane coupling agent and (meth)acrylic resin in the same reference. Being taught in the same reference, appellants have no basis to argue their incompatibility.

Regarding appellants' argument that Makino et al. teach the use of an amine as a co-catalyst, not an accelerator, the examiner disagrees. Appellants must recognize that "an accelerator" is any material that can accelerate the decomposition of the peroxide, and the amine of Makino et al. clearly have achieved the acceleration effect via the redox reaction mechanism as taught in Makino et al. Appellants must recognize that some catalysts generally would only work in the presence a co-catalyst. However, as for the peroxide of Makino et al., the use of an amine is to accelerate the decomposition of the peroxide. Without the said amine, the peroxide of Makino et al. can still decompose, however at a slower rate.

In view of the reasons set forth above, the examiner has a reasonable basis to maintain the rejection set forth.

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**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.



Respectfully submitted,

William K. Cheung, Ph. D.

Primary Examiner

August 6, 2007

Conferees:



David Wu



Delmendo, Romulo